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7590

01/13/2010

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EXAMINER

ARNOLD, ERNST V

ART UNIT

PAPER NUMBER

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/521,295	<b>Applicant(s)</b> RESMAN ET AL.	
	<b>Examiner</b> ERNST V. ARNOLD	<b>Art Unit</b> 1616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 08 October 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7-9, 12-18 and 20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-9, 12-18 and 20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/08/09</u> .  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

Claims 6, 10, 11, and 19 have been cancelled. Claim 20 is new. Claims 1-5, 7-9, 12-18 and 20 are pending and under examination. Applicant's amendment has necessitated a new ground of rejection. Accordingly, this Action is FINAL.

#### ***Information Disclosure Statement***

The information disclosure statement (IDS) submitted on 10/8/09 was filed after the mailing date of the non-final office action on 6/15/09. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

#### **Withdrawn rejections:**

Applicant's amendments and arguments filed 10/8/09 are acknowledged and have been fully considered. Any rejection and/or objection not specifically addressed below is herein withdrawn. Claims 17 and 18 were rejected under 35 U.S.C. 102(b) as being anticipated by Meyer et al. (US 5609909). Applicant has amended the claims to overcome this rejection. Accordingly, it is withdrawn by the Examiner.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-5, 7-9 and 12-18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 1 introduces new matter as the claim recites the limitation: "at least about 90% of the micronized clarithromycin particles are about 30  $\mu\text{m}$  or less in size." There is no support in the specification for this limitation. The limitation of: "at least about 90% of the micronized clarithromycin particles are about 30  $\mu\text{m}$  or less in size" was not described in the specification as filed, and person skilled in the art would not recognize in the applicant's disclosure a description of the invention as presently claimed. The specification discloses "micronized clarithromycin with a particle size from d(0.9) up to about 30  $\mu\text{m}$ " on page 5 but does not describe the instantly claimed limitation. There is no guidance in the specification to select "at least about 90% of the micronized clarithromycin particles are about 30  $\mu\text{m}$  or less in size" and from MPEP 2163.06: "Applicant should therefore specifically point out the support for any amendments made to the disclosure." Applicant directed the Examiner to page 5 for support in the specification for the

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amendments but the Examiner has shown that is incorrect. Therefore, it is the Examiner's position that the disclosure does not reasonably convey that the inventor had possession of the subject matter of the amendment at the time of filing of the instant application.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 17 and 18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 17 and 18 introduce new matter as the claims recite the limitation: "a capsule" There is no support in the specification for this limitation. The limitation of: "a capsule" was not described in the specification as filed, and person skilled in the art would not recognize in the applicant's disclosure a description of the invention as presently claimed. The specification discloses "encapsulating" on page 6 but does not describe the instantly claimed limitation. Simply because something is encapsulated does not necessarily mean that a capsule is present. A tablet can be encapsulated with an enteric coating, for example. There is no guidance in the specification to select "a capsule" and from MPEP 2163.06:

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“Applicant should therefore specifically point out the support for any amendments made to the disclosure.” Applicant directed the Examiner to the support in the specification on page 6 for the amendments but support has not been found. Therefore, it is the Examiner’s position that the disclosure does not reasonably convey that the inventor had possession of the subject matter of the amendment at the time of filing of the instant application.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 18 remains rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for treating diseases treatable with clarithromycin, does not reasonably provide enablement for preventing all diseases. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims without an undue amount of experimentation.

**Let the Examiner be clear: Applicant is not enabled for preventing all diseases.**

The factors to be considered in determining whether a disclosure meets the enablement requirement of 35 U.S.C. 112, first paragraph, have been described in *In re Wands*, 8 USPQ2d 1400 (Fed. Cir. 1988). Among these factors are: 1) scope or breadth

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of the claims; 2) nature of the invention; 3) relative level of skill possessed by one of ordinary skill in the art; 4) state of, or the amount of knowledge in, the prior art; 5) level or degree of predictability, or a lack thereof, in the art; 6) amount of guidance or direction provided by the inventor; 7) presence or absence of working examples; and 8) quantity of experimentation required to make and use the claimed invention based upon the content of the supporting disclosure. When the above factors are weighed, it is the Examiner's position that one skilled in the art could not practice the invention without undue experimentation.

1) Scope or breadth of the claims

The claims are broader in scope than the enabling disclosure. The specification merely discloses, without more, formulations of micronized clarithromycin. However, Applicant is purporting to treat and prevent any and all diseases.

2) Nature of the invention

The nature of the invention is directed to formulation of micronized clarithromycin.

3) Relative level of skill possessed by one of ordinary skill in the art

MPEP 2141.03 states (in part), "A person of ordinary skill in the art is also a person of ordinary creativity, not an automaton." KSR International Co. v. Teleflex Inc., 127 S.Ct. 1727, 167 LEd2d 705, 82 USPQ2d 1385, 1397 (2007). "[I]n many cases a person of ordinary skill will be able to fit the teachings of multiple patents together like pieces of a puzzle." Id. Office personnel may also take into account "the inferences and creative steps that a person of ordinary skill in the art would employ." Id. At 1396, 82

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USPQ2d at 1396. The “hypothetical person having ordinary skill in the art” to which the claimed subject matter pertains would, of necessity have the capability of understanding the scientific and engineering principles applicable to the pertinent art.” Ex parte Hiyamizu, 10 USPQ2d 1393, 1394 (Bd. Pat. App. & Inter. 1988) (The Board disagreed with the examiner’s definition of one of ordinary skill in the art (a doctorate level engineer or scientist working at least 40 hours per week in semiconductor research or development), finding that the hypothetical person is not definable by way of credentials, and that the evidence in the application did not support the conclusion that such a person would require a doctorate or equivalent knowledge in science or engineering.). (emphasis added).

4) State of, or the amount of knowledge in, the prior art

The art teaches compositions of micronized clarithromycin (Meyer et al. (US 5609909)).

5) Level or degree of predictability, or a lack thereof, in the art

The art teaches that there is no know way to prevent type 1 diabetes (medical encyclopedia: Type 1 diabetes, page 7 of 7).

The art teaches that there is no known cure for multiple sclerosis (medical encyclopedia: multiple sclerosis, page 3 of 5).

6) Amount of guidance or direction provided by the inventor

Applicant was required to provide in the specification additional guidance and direction with respect to how use the claimed subject matter in order for the application



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to be enabled with respect to the full scope of the claimed invention. Nothing has been provided about preventing any and all diseases.

7) Presence or absence of working examples

The specification fails to provide scientific data and working embodiments with respect to preventing all diseases.

8) Quantity of experimentation required to make and use the claimed invention based upon the content of the supporting disclosure

One of ordinary skill in the art would have to conduct a myriad number of experiments comprising trial and error administration of the composition to patients with incurable diseases where the consequence of failure can be patient death. Essentially, one of ordinary skill in the art has to figure out how to do this themselves. As a result, one of ordinary skill in the art would be required to conduct an undue amount of experimentation to see if this composition can treat and prevent any and all diseases.

Genotech, 108 F.3d at 1366 states that “a patent is not a hunting license. It is not a reward for search, but compensation for its successful conclusion” and “patent protection is granted in return for an enabling disclosure of an invention, not for vague intimations of general ideas that may or may not be workable.” (Genentech, Inc. v. Novo Nordisk, A/S, 108 F.3d 1361, 1365, 42 USPQ2d 1001, 1004 (Fed. Cir. 1997)).

**Response to arguments:**

Applicant asserts claim 18 covers treatment and prevention of those diseases treatable with the active ingredient clarithromycin in claim 1. Respectfully, the Examiner cannot agree. Claim 18 does not limit the types of diseases that can be prevented and it

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is furthermore unlikely that clarithromycin can prevent any diseases at all. No objective evidence has been provided which would suggest that. Please note that the term "prevention" is an absolute definition which means to stop from occurring and, thus, requires a higher standard for enablement than does "therapeutic" or "treat". Applicant's opinion that clarithromycin can prevent bacterial infections is not persuasive and cannot substitute for objective evidence.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-5, 7-9 and 12-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 recites: "at least about 90%". The term 'at least' provides a static point while the term 'about' provides a dynamic point. The amount '90%' cannot simultaneously be static and dynamic. Either the amount is 'at least 90%' or the amount is 'about 90%'. The Examiner will interpret the claim as it reads on 'at least 90%'. Claims 2-9 and 12-18 are rejected as being indefinite because they are dependent on an indefinite base claim.

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***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-5, 7-9, 12-18 and 20 remain/are rejected under 35 U.S.C. 103(a) as being unpatentable over Broad et al .US 5705190 in view of Ansel et al.

(Pharmaceutical Dosage Forms and Drug Delivery Systems 7<sup>th</sup> Edition, 1999, Lippincott Williams & Wilkins, NY, pages 91, 108, 209-211 and 221-223) and Kirschner et al. (US 6899890).

Applicant claims:

Claim 1. (Currently Amended) A method for a physical pre-treatment of an active substance, characterized in that it comprises adding a poor solvent or a mixture of solvents to the active substance or to a mixture of the active substance with one or more excipients, the solubility of the substance in said solvent being less than 0.1 g/L, followed by drying, wherein the active substance comprises micronized clarithromycin, wherein at least about 90% of the micronized clarithromycin particles are about 30µm or less in size.

### **Determination of the scope and content of the prior art**

#### **(MPEP 2141.01)**

Broad et al. teach sparingly soluble drugs such as clarithromycin (which is intrinsically difficult to be directly tabletted or encapsulated, brittle and/or porous) which has a solubility of about 1 part in 1000 part of water which the Examiner interprets to mean practically insoluble (Abstract; column 1, lines 5-10; column 2, lines 46-59; and column 3, lines 38-40). The amount of drug can vary from about 40 to 75% of the total tablet (column 3, lines 63-65). Dry blending of ingredients followed by wet granulation with an aqueous solution (water is a poor solvent), drying, and tableting is taught which reads on instant claim 13 (see example 1, column 5, for example). The presence of water intrinsically humidifies the composition. Excipients are taught such as diluents, binders, glidants, bulking agents and coating materials (column 5, lines 1-10). Compositions can be coated (column 5, lines 11-14).

Ansel et al. teach why one of ordinary skill in the art would micronize poorly soluble drugs which is to enhance the rate of dissolution (page 108, right column); how to make tablets through a wet granulation process which introduces water and intrinsically humidifies the ingredients (pages 209-211); teach aqueous film forming

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coating agents such as hydroxyethyl cellulose and hydroxypropyl methylcellulose (the same material used by applicant: see instant specification page 10, example 5) (page 91, table 3.3; and pages 221-223). Since the agents are the same as instantly claimed then they intrinsically have the same viscosity in the absence of evidence to the contrary.

Kirschner et al. teach micronized therapeutically active drug, such as clarithromycin, with a particle size ranging from about 0.1 microns to less than 60 microns in a tablet (Claims 1-5, 9, 13 and column 14, line 53).

### **Ascertainment of the difference between the prior art and the claims**

#### **(MPEP 2141.02)**

1. The difference between the instant application and Broad et al. is that Broad et al. do not expressly teach micronizing the clarithromycin to a particle size of where at least 90% of the micronized clarithromycin particles are about 30  $\mu\text{m}$  or less in size. This deficiency in Broad et al. is cured by the teachings of Ansel et al. and Kirschner et al.

2. The difference between the instant application and Broad et al. is that Broad et al. do not expressly teach a polymer in the coating with the recited viscosity values or more than one coating agent on a clarithromycin tablet of instant claim 20. This deficiency in Broad et al. is cured by the teachings of Ansel et al.

### **Finding of prima facie obviousness**

#### **Rational and Motivation (MPEP 2142-2143)**

1. It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to micronize the clarithromycin to a particle size of where at least 90% of the micronized clarithromycin particles are about 30  $\mu\text{m}$  or less in size of Broad et al., as suggested by Ansel et al. and Kirschner et al., and produce the instant invention.

One of ordinary skill in the art would have been motivated to do this because it is known that clarithromycin is sparingly soluble and Ansel et al. teach that to increase the rate dissolution one of ordinary skill in the art can micronize the drug. Kirschner et al. provide guidance on the proper particle size to use in tablets and in the absence of evidence to the contrary all of the particles, 100% can be within the instantly claimed size.

2. It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to add a polymer in the coating of Broad et al. with the recited viscosity values or more than one coating agent of instant claim 20, as suggested by Ansel et al., and produce the instant invention.

One of ordinary skill in the art would have been motivated to do this because Broad et al. teach adding a coating and Ansel et al. teach the same polymers to use for the coating. It is merely judicious selection of one or more of the known coating polymers taught by Ansel et al. by one of ordinary skill in the art in the absence of

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evidence to the contrary. Furthermore, granulation techniques are well known in the art as taught by Ansel et al. and the products can be then film coated as taught by Ansel et al. and discussed above.

In light of the forgoing discussion, the Examiner concludes that the subject matter defined by the instant claims would have been obvious within the meaning of 35 USC 103(a).

From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole was *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

**Response to arguments:**

Applicant asserts that none of the cited references teach the new limitation of particle size. Respectfully, the new reference of Kirschner et al. provides guidance for which particle size to select.

Applicant asserts that it is not true that the agents taught in Ansel intrinsically have the same viscosity as instantly claimed. This is merely an assertion without proof. The Examiner cannot agree. First of all, all that is claimed is a general term "film-forming agent" that has a certain viscosity. Ansel provides for "film-forming agents" as defined in the specification as hydroxypropylmethylcellulose and hydroxypropylcellulose ([0039] of the USPGPUB). No further defining structural details have been provided by Applicant. The Examiner reminds Applicant that: "A chemical composition and its properties are

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inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present.” *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

Applicant’s arguments are not persuasive and the rejection is maintained.

### ***Conclusion***

No claims are allowed.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.



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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ernst V. Arnold whose telephone number is 571-272-8509. The examiner can normally be reached on M-F (7:15 am-4:45 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Ernst V Arnold/  
Primary Examiner, Art Unit 1616